

REMARKS

The Office Action of January 3, 2002, has been carefully considered.

Objection has been raised on the basis that the specification lacks an Abstract. While applicants believe that a proper Abstract was submitted with the specification, a substitute Abstract has been submitted herewith.

A number of objections have been raised to the specification and claims. The claims have now been canceled, and a new set of claims added hereinabove. As regards the specification, in order to correct the various problems with the specification, a substitute specification has been submitted. This substitute specification includes proper subject matter headings, as well as a number of corrections which are to overcome the objection to the drawings under 37 CFR 1.84(p)(4). In the amendment to the specification, element 12 has been designated a "ground wall" rather than a base, and the armature shaft is no longer designated as element 20. In addition, the term "parallel partition" has been added to indicate that it is the same element as the side walls. Pocket hole 44 has also been designated a "recess".

Objection has been raised to the drawings on the basis that the details are too dark. A new copy of the drawings is

submitted herewith and formal drawings will be prepared upon allowance of the application.

Regarding Figure 13, it can be seen from the attached drawing that element 26 and groove 98 are not the same component.

Objection has been raised to the drawings under 37 CFR 1.83(a) as not showing every feature of the invention specified in the claims.

As regards claim 1, it is initially noted that claim 1 has been rewritten as new claim 18, in which the carbon brush is no longer defined as extending outwardly from the base plate.

Regarding the operation of the apparatus, for aligning the base plate 10 in the direction of a commutator which is on a shaft passing through the central bore of Figure 2, the carbon brushes 22 must be arranged initially outside the shifting path of the commutator. For this purpose, a retaining element 26, clearly shown in Figures 4 and 5, is provided, the retaining element being movable against the force of a spring 48. When the spring moves the retaining element into a first position, shown in Fig. 4, the carbon brush can be engaged with protrusion 42 of retaining element 26. By pressing against the spring, as shown in Fig. 5, the brush can be released. The application of force to the retaining element thus causes sufficient movement to release the carbon brush from the

protrusion. Such force can be provided, for example, by a shoulder 18 of a casing 80 which displaces the retaining element to release the brush.

According to an alternative embodiment that is shown in Figures 12 and 13, it is not required that the retaining element 26 be forced by a spring toward the carbon brush. The protrusion 42 of the retaining element 26 can be wedged in a hole of the carbon brush which takes place when a sufficient force of a spring 46, such as a coil spring, acts upon brush 22.

Regarding the retaining element, partition walls 30 and 32 have protrusions 99 meshing in grooves 98 of the retaining element 26. This can be seen from Figures 12 and 13. Retaining element 26 is displaced in a guided manner when driven by a force towards the ground wall 12, and thereby, the protrusion 42 is disengaged from the hole.

As regards to claims 15 and 16, these claims have now been replaced by new claims 30 and 31. In claim 30, the first portion that extends along the base or partition can be seen in Figure 7 as element 68, and in claim 31, the metal element can be seen as element 74 in Figure 7.

Accordingly, all features of the claims are shown in the drawings.

Claims 1-17 have been rejected under 35 U.S.C. 112, first paragraph, as containing subject matter not specifically

described in the specification. As noted above, the movable retainer that is shifted against the force of a spring is adequately shown in the drawings and described in the specification and is further described in the above explanation. Withdrawal of this rejection is accordingly requested.

Claims 1-17 have been rejected under 35 U.S.C. 112, second paragraph, as being indefinite, and these claims have now been canceled and replaced by claims which are thought to clearly recite the elements of the invention. Withdrawal of this rejection is accordingly requested.

Claims 1, 3, 4 and 6 have been rejected under 35 U.S.C. 102(b) as anticipated by Rubinchik. Applicants submit that the claimed invention is patentable over the cited reference.

Rubinchik discloses a base plate having a carbon brush and a brush guide, with a spring element for aligning the carbon brush towards a commutator. The Office Action states that Rubinchik also discloses a retaining element 100 that can be shifted, as shown in Figure 17.

Figure 17 shows a brush guide having tabs 100 and 102 which can be bent for releasing a retained carbon brush. However, according to the claimed invention, the retaining element is not part of the brush guide, but is slidably supported by the base plate in a direction perpendicular to the longitudinal axis of a carbon brush mounted in the guide. By

making the retaining element separate from the brush guide, it is possible to use an external element such as a lid to displace the retaining element. Note in particular that the retaining element is mounted to the base plate adjacent to the at least one brush guide, which is not the case according to the Rubinchik patent.

Moreover, according to claim 20, the retaining element is arranged slidably in a guide of the base plate running perpendicular to the longitudinal carbon brush, as shown in Figures 4 and 5. This structure is not disclosed or suggested by the Rubinchik patent.

Withdrawal of this rejection is accordingly requested.

Claims 11 and 13-17 have been rejected under 35 U.S.C. 102(e) as anticipated by Prell et al.

Prell et al has been cited to show a brush 34 mounted in a brush holder having a base plate by a spring 50, with a retaining plate 42 and a U-shaped carbon brush guide. A plate-like element 16 extends between brush 34 and base plate 14 when the element is connected to the U-shaped element 24.

It is noted that new claim 28 recites a brush guide comprising a U-shaped metal element having a center leg extending along a top wall of the carbon brush mounted in the brush guide, and lateral legs extending perpendicular to the center leg along the side walls of the carbon brush mounted in the brush guide. These lateral legs end in outer sections

which penetrate a ground wall of the base plate or an intermediate wall extending parallel to the ground wall, and which are attached to a surface of the ground wall or intermediate wall running opposite to the brush guide.

Prell et al does not disclose lateral legs of the U-shaped metal element penetrating a wall of the apparatus, for enabling fixing of the carbon brush guide solely by bending end sections of the guide. To the extent that Prell et al discloses a U-shaped guide, the lateral legs of the guide terminate at the spring 52 without penetrating a wall.

Withdrawal of this rejection is accordingly requested.

Claims 2, 5, 7-10 and 12 have been rejected under 35 U.S.C. 103 over Rubinchik in view of Prell et al.

As regards claim 2, it is not clear how the combination of Rubinchik and Prell et al provides a teaching of the invention. According to claim 19, the apparatus includes a removable cover which includes means causing the retaining element to become disengaged from the carbon brush. The retaining element according to Rubinchik is integral with the carbon brush guide, and releasing the retaining element does not take place by covering the base plate with the casing. Prell et al discloses a spring assembly which is mounted to an access door, and which releases the brush when the door is opened rather than closed.

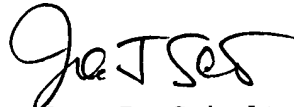
As regards claims 7-10, now claims 24-27, these are directed to the guide of the retaining element which, as is recited in claim 18, is a separate element from the brush guide. There is no disclose of such a structure in the cited art.

The disclosure of claim 12 is now part of new claim 28, and as noted above, there is no disclosure or suggestion in Prell et al that the legs extend through the base plate.

Withdrawal of this rejection is accordingly requested.

In view of the foregoing amendments and remarks, Applicants submit that the present application is now in condition for allowance. An early allowance of the application with amended claims is earnestly solicited.

Respectfully submitted,



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